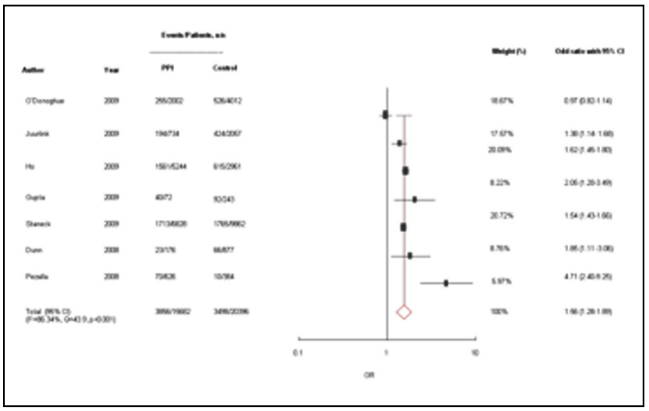

CONCLUSIONS PPI use concomitant with clopidogrel is associated with increased risk of mortality and myocardial infarction after coronary intervention. Beneficial effect of clopidogrel may be attenuated by drug interaction with PPI.

CATEGORIES CORONARY: Acute Myocardial Infarction

KEYWORDS Meta-analysis, Myocardial infarction, Proton pump inhibitors

TCT-256

Prognostic value of ACEF (age, creatinine, ejection fraction) score in patients undergoing percutaneous coronary intervention after acute myocardial infarction

Jang Hoon Lee,[1] Chang Yeon Kim,[1] Nam Kyun Kim,[1] Se Yong Jang,[1] Sun Hee Park,[1] Myung Hwan Bae,[1] Dong Heon Yang,[1] Hun Sik Park,[1] Yongkeun Cho,[1] Shung Chull Chae[1]
[1]Kyungpook National University Hospital, Daegu, Korea, Republic of

BACKGROUND Recently, ACEF (age, creatinine, ejection fraction) score showed prognostic value predicting major adverse cardiac events (MACEs) in patients undergoing percutaneous coronary intervention (PCI) after acute myocardial infarction (AMI). However, it has not been fully validated yet in large population. We aimed to assess whether ACEF score would improve the ability of the GRACE score to predict MACEs of patients undergoing PCI after AMI.

METHODS Between November 2005 and July 2014, 11,549 patients (8,442 men; 63±13 year-old) underwent PCI after AMI were included from Korean AMI registry. The ACEF score was calculated as follows: age/left ventricular ejection fraction + 1 if serum creatinine >2 mg/dL. The 1-year MACEs were stratified according to ACEF score tertiles; ACEFLOW≤ 1.07 (n=3,828), 1.07 < ACEFMID ≤ 1.44 (n=3,848), and ACEFHIGH> 1.44 (n=3,873). The 1-year MACEs were defined as death, non-fatal MI, and revascularizations.

RESULTS During the follow-up, rate of MACE was significantly higher in the highest tertile group compared with patients in the lower 2 tertiles (8.5% versus 10.5% versus 24.0%; log-rank p<0.001). In Cox-proportional hazards model, ACEF score (hazards ratio [HR] 1.60, p<0.001) in addition to Killip class >1 (HR 1.39, p<0.001), anterior MI (HR 1.13, p=0.035), diabetes mellitus (HR 1.27, p<0.001), multivessel disease (HR 1.51, p<0.001), pre TIMI flow 0 or 1 (HR 1.19, p=0.07), and GRACE score (HR 1.01, p<0.001) was an independent predictor of 1-year MACEs. The respective C-statistics from ACEF score was significantly higher compared with those of GRACE score in terms of 1-year MACEs (0.672 versus 0.651, p=0.0005) and mortality (0.807 versus 0.777, p=0.0001). The ACEF score significantly improved net reclassification of patients compared to GRACE score in terms of 1-year MACEs (0.153, p<0.001) and mortality (0.038, p<0.0001), and also significantly improved integrated discrimination of patients compared to GRACE score in terms of 1-year MACEs (0.085, p=0.005) and mortality (0.028, p<0.001).

CONCLUSIONS The ACEF score improves the discrimination accuracy of conventional risk model to predict MACEs of patients underwent PCI after AMI.

CATEGORIES CORONARY: Acute Myocardial Infarction

KEYWORDS Acute myocardial infarction, Percutaneous coronary intervention, Risk model

TCT-257

Frequency and clinical impact of prasugrel cessation after primary PCI in STEMI patients: a prospective cohort study

Lorenz Raber,[1] Thomas Zanchin,[2] Dik Heg,[3] Roland Klingenberg,[4] Baris Gencer,[5] Andreas Baumbach,[6] Marco Roffi,[7] Olivier Muller,[8] Bernhard Meier,[1] Thomas F. Lüscher,[9] Peter Jüni,[10] Christian M. Matter,[4] Stephan Windecker[11]
[1]University Hospital Bern, Bern, Switzerland; [2]University Hospital Bern, Bern, Bern; [3]Institute of Social and Preventive Medicine, University of Bern, Bern Switzerland, Bern, Switzerland; [4]University Hospital Zurich, Zurich, Switzerland; [5]Geneva University Hospital, Geneva, Switzerland; [6]University of Bristol, Bristol, United Kingdom; [7]HOPITAUX UNIVERSITAIRES DE GENEVE (HUG), Geneva, Switzerland; [8]University Hospital, Lausanne, Vaud; [9]University Hospital Zürich, Zürich, Switzerland; [10]University of Bern, Bern, Switzerland; [11]Bern University Hospital, Bern, Switzerland

BACKGROUND STEMI patients are at increased risk for recurrent ischemic events, and guidelines recommend potent P2Y12 inhibitors for the duration of at least one year after primary PCI. The frequency and clinical impact of premature prasugrel cessation or a change to clopidogrel or ticagrelor following primary PCI remains unknown.

METHODS Between September 2009 and June 2012, 1382 patients with STEMI undergoing primary PCI using newer generation DES and discharged on dual antiplatelet therapy with prasugrel and aspirin were enrolled in the framework of the Comfortable trial, SPUM ACS registry and Bern PCI registry. Prasugrel was prescribed for one year. Clinical follow-up information was obtained at discharge, 30 days and one year. Prespecified categories for prasugrel cessation included disruption (non-compliance, bleeding, side effects), physician recommended discontinuation or a change to clopidogrel. All adverse events and information on prasugrel cessation was collected and independently adjudicated according to the 3 categories. Using cox regression models with time-dependent variables, we assessed the effect of prasugrel cessation on cardiovascular outcomes. The primary outcome measure was defined as cardiac death, reinfarction, and stroke. Secondary endpoints included death, cardiac death, reinfarction and definite stent thrombosis.

RESULTS A total of 1,382 STEMI patients were included: 1,196 (86.5%) patients completed DAPT on prasugrel throughout one year; Prasugrel was disrupted in 48 (3.5%) patients, discontinued in 42 (3%) patients and switched to another P2Y12 inhibitor in 95 (6.9%) patients. The adjusted hazard ratio (HR) for MACE after prasugrel disruption tended to be increased (2.34 (95% CI 0.85-6.38); p=0.098), while no difference was observed after premature discontinuation (HR= 1.43 (95 CI 0.34-5.91); p=0.63) or change in type of P2Y12 therapy (HR=1.20 (95% CI 0.48-3.01); p=0.69); in each case compared to the period the patients were on DAPT with prasugrel. Disruption was associated with an increased risk of death (6.09, 95% CI 1.72-21.59, p=0.005), cardiac mortality (HR=4.63, 95% CI 1.00-21.54; p=0.05) and stent thrombosis (HR=4.22, 95% CI 1.27-14.05, p=0.019), while there was a trend towards an increased risk of MI (HR=2.78, 95% CI 0.86-8.94, p=0.087).

CONCLUSIONS A high proportion STEMI patients remained on DAPT with prasugrel throughout one year after primary PCI in routine clinical practice. Prasugrel disruption is infrequent but associated with an increased risk for ischemic cardiovascular events compared to physician guided discontinuation or change to clopidogrel.

CATEGORIES CORONARY: Acute Myocardial Infarction

KEYWORDS PCI - Percutanoeus Coronary Intervention, Prasugrel, ST elevation myocardial infarction

TCT-258

Reasons for False ST Elevation Myocardial Infarction activations at a Primary Percutaneous Coronary Intervention Capable Center

Christina M. Dookhan,[1] Abhijit Ghatak,[2] Cesar Mendoza,[3] Eduardo de Marchena,[2] Alexandre Ferreira[3]
[1]Jackson Memorial Hospital/ University of Miami Miller School of Medicine, Miami, FL; [2]University of Miami Miller School of Medicine, Miami, FL; [3]Jackson Memorial Hospital, Miami, FL

BACKGROUND Several conditions may mimic a true ST Elevation Myocardial Infarction (STEMI) and lead to false activation of the Cardiac Catheterization Laboratory (CCL). We investigated the reasons for false STEMI activations at our institution.

METHODS We reviewed the medical records of all patients presenting to our institution for percutaneous coronary intervention for possible STEMI from July 2012 to November 2014. A false STEMI activation was